AGENCY OF NATURAL RESOURCES DEPARTMENT OF ENVIRONMENTAL CONSERVATION 1 NATIONAL LIFE DRIVE, MAIN 2 MONTPELIER, VT 05620-3521

DRAFT INDIRECT DISCHARGE PERMIT

Permit No.: ID-9-0260 PIN: BR95-0089.05

SECTION A "ADMINISTRATION"

In compliance with provisions of 10 V.S.A. §1263, and in accordance with the following conditions, the permittee:

Summit Ventures NE, LLC. 1840 Sugarbush Access Road Warren, Vermont 05674

is authorized to discharge tertiary treated domestic sewage from a wastewater disposal system serving the Lincoln Peak Base Area of Sugarbush Ski Area to groundwater and indirectly into Clay Brook. This is a permit renewal.

A1. Permit Summary:

Expiration Date March 31, 2022

Type of Waste Tertiary Treated Domestic Sewage
Sequencing Batch Reactors with
Phosphorus and Nitrogen Removal

Disposal System Leachfields Town Warren

Drainage Basin Winooski River Receiving Stream Clay Brook

Drainage Area of Clay Brook

at Point of Compliance 1.97 square miles Low Median Monthly Flow (LMMF)

Clay Brook 499,480 gallons per day Approved Treatment Capacity 66,600 gallons per day Approved Disposal Capacity 79,210 gallons per day

Approved Disposal Application Rate 3.7 gallons per day per square foot

of leachfield area Dilution Ratio (summer)

(Stream Flow to Effluent) 6.3 : 1 at LMMF

A2. <u>Compliance Schedule</u>:

	Condition # & Description	Schedule Date
A3.	Apply for renewal of Indirect Discharge Permit	December 31, 2021
D4A.	Have a Vermont Registered Professional Engineer complete an inspection of the sewage collection, treatment, and disposal system.	Annually in April
D4B.	Submit Annual Inspection Report	Annually, by July 1st
D4C.	Submit schedule for implementing engineer's recommendations	Annually, by August 1st
D10.	Submit operations reports	Monthly
E2A.	Collect and analyze influent samples	As specified
E2B.	Collect and analyze effluent samples	As specified
E3.	Collect and analyze groundwater samples	Monthly
E4.	Measure and record depth of ponding in observation wells	Monthly
E5.	Collect and analyze surface water samples	As specified
E2A,	E2B, E3, E5. Submit results of monitoring	By the 15th of the second month following the date of sampling
E2A,	E2B, E4, E5. Submit results of flows and ponding	By the 15th of the month following the date of recording
E6.	Submit water quality evaluation	Annually, by December 31st
E7.	Perform biological monitoring	August - September each year
E7.	Submit results of biological monitoring	By March 31st of the following year

A3. Expiration Date:

This permit, unless revoked, or amended shall be valid until March 31, 2022 despite any intervening change in Water Quality Standards or the classification of receiving waters. Renewal of this Indirect Discharge Permit will be subject to all rules applicable at the time of renewal, including biological standards to determine significant alteration of aquatic biota.

The permittee shall apply for an Indirect Discharge Permit renewal by December 31, 2021 for continued authorization to discharge treated domestic sewage. For the purposes of Title 3, an application for renewal of this indirect discharge permit will be considered timely if a complete application is received by the expiration date.

A4. Effective Date:

This permit becomes effective on the date of signature.

A5. Revocation:

The Secretary may revoke this permit in accordance with 10 V.S.A. §1267.

A6. Transfer of Permit:

This permit is not transferable without prior written approval of the Secretary. The permittee shall notify the Secretary immediately, in writing, before any sale, lease or other transfer of ownership of the property from which the discharge originates. The proposed transferee shall make application for a permit to be reissued in his name. Failure to apply shall be considered a violation of this permit. Responsibility for compliance with the conditions of this permit shall be the burden of the permittee until such time as transfer of the permit to the transferee is complete. All application and operating fees must be paid in full prior to transfer of this permit. This permit shall be transferred only upon showing by the permittee or proposed transferee of compliance with the following conditions:

- a. The transferee shall be a legal entity, financially and technically competent to operate, inspect, maintain and replace the systems.
- b. The transferee shall demonstrate that they have the legal authority to raise revenues for the proper operation, inspection, and maintenance of the system.
- c. The transferee shall provide a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new permittees to the Secretary.

A7. Minor Modification of Permit:

The Secretary may modify this permit without requiring a permit application, a public notice, or a public hearing to correct typographical errors, or to increase monitoring frequency, in accordance with Section F of this permit.

A8. Compliance Demonstration Method:

This indirect discharge was reviewed and qualified for an Indirect Discharge Permit in accordance with §14-403 Systems with New Indirect Discharges to Class B Waters of the February 29, 1996 Indirect Discharge Rules (IDR). Compliance with §14-404 Aquatic Permitting Criteria of the IDR was demonstrated using the site-specific method found in Appendix B of the IDR, specifically §§14-B-203 Soil Extraction and Laboratory Testing; 14-B-206 Evaluation of Soil Renovated Effluent Data; 14-B-207 Stream Flow and Releases; 14-B-208 Existing Instream Receiving Water Quality; and 14-B-209 Determine Compliance Using Site Specific Methods.

A Wastewater System and Potable Water Supply Permit is required for any new building to be connected to the system.

A9. Right of the Agency to Inspect:

The permittee shall allow the Secretary or the Secretary's authorized representative upon the presentation of their credentials and at reasonable times:

- a. To enter upon permittee's premises in which any effluent source treatment or sprayfield system is located or in which any records are required to be kept under the conditions of the permit;
- b. To have access to and copy any records required to be kept under conditions of this permit;
- c. To inspect any monitoring equipment or method required in this permit;
- d. To sample any discharge of waste, groundwater or surface water; and
- e. To inspect any collection, treatment, pollution management, sprayfield facilities or monitoring equipment required by this permit.

A10. Permit Availability:

A copy of this permit shall remain at the office of the permittee and, upon request, shall be made available for inspection by the Secretary.

A11. Minor Modifications to System:

Minor modifications of the engineering design which do not reduce the treatment effectiveness or increase the capacity of the system may be approved in writing by the Secretary without a permit amendment.

Before making modifications to the treatment and/or disposal system, the permittee shall submit plans to the Secretary for review and approval. Plans for modification must be approved before any of the modifications or additions are made.

A12. Correction of Failed System:

The Secretary may, upon discretion, issue an Amendment to the Indirect Discharge Permit for the design and reconstruction of a failed wastewater disposal system where the replacement system design was not previously approved.

Before reconstruction of the failed system the permittee shall submit plans to the Secretary for review and approval. These plans must be approved before any reconstruction occurs. Due to the urgency of the need to correct failed disposal systems, the Secretary will process these Amendments as soon as possible.

A13. Operating Fees:

This indirect discharge is subject to operating fees. The permittee shall submit the operating fees in accordance with procedures provided by the Secretary.

SECTION B "INDIRECT DISCHARGE"

B1. Location of Indirect Discharge:

The treatment and subsurface disposal system is located on a parcel of land owned by Summit Ventures NE, LLC at the Sugarbush South Ski Area east of Inferno Road in the Town of Warren, Vermont. The location of the subsurface disposal system and discharge can be found on the United States Geological Survey Mount Ellen, Vermont 7.5' quadrangle at approximately Longitude 72°53'30" and Latitude 44°07'45".

B2. Nature of Indirect Discharge:

The 66,600 gallon per day wastewater treatment facility consists of sequencing batch reactors (SBRs) followed by filtration and ultraviolet disinfection. The SBR process is designed to achieve nitrification, denitrification, and biological phosphorus removal. The tertiary treated effluent is discharged via pressure distribution to a series of trenches within leachfields.

A total of 21,408 ft² of trench area is available for disposal. One hundred percent dual alternating leachfields is provided. At an application rate of 3.7 gpd/ft², the disposal capacity is 79,210 gpd.

Cooling tower "blowdown" water from the Claybrook building will be discharged to the wastewater collection system from April through September of each year.

SECTION C "SYSTEM CONSTRUCTION"

C1. Previous Approvals:

The sewage collection, treatment, and disposal system was completed in accordance with the following plans and specifications prepared and stamped by various professional engineers of DuBois & King, Inc., and which were stamped "APPROVED" by the Secretary.

Specifications: Technical Specifications R14261, January 1997 Section 11300 – Ultraviolet Disinfection System Plans;

SHEET#	<u>TITLE</u>	DATE <u>PREPARED</u>	LAST <u>REVISION</u>
2 of 41	Site Plan	1/97	5/2/97
3 of 41	Site Grading, Drainage, And Utilities Plan WWTF	1/97	5/2/97
4 of 41	Site Grading, Drainage, and Utilities Plan Disposal Fields	1/97	5/2/97
5 of 41	Process Flow Schematic And Hydraulic Profile	1/97	4/8/05
12 of 41	Disposal Field-Schedule And Details	1/97	5/2/97
13 of 41	Disposal Fields-Cross Sections	1/97	N/A

C1. Previous Approvals (continued):

1 10 110 do 7 tp	orovais (continued).	DATE	LAST
SHEET#	<u>TITLE</u>	PREPARED	REVISION
14 of 41	Miscellaneous Details	1/97	4/8/05
23 of 41	Building Plan Upper Level	1/97	N/A
24 of 41	Building Plan Lower Level	1/97	4/8/05
30 of 41	Process Piping Plan and Details Upper Level	1/97	N/A
31 of 41	Process Piping Plan and Details Lower Level	1/97	4/8/05
32 of 41	Process Piping Plans and Details	1/97	4/8/05
33 of 41	Chemical Schematics/Details	1/97	4/8/05
34 of 41	Chemical Room Plan, Sections and Details	1/97	N/A
35 of 41	First Floor Mechanical Plan	1/97	N/A

SECTION D "SYSTEM OPERATION"

D1. General Operating Requirements:

The sewage treatment and disposal system shall be operated at all times in a manner that will (1) not permit the discharge of sewage onto the surface of the ground; (2) not result in the surfacing of sewage; 3) not result in the direct discharge of sewage into the waters of the State; (4) not result in a violation of Water Quality Standards; and (5) not result in a significant alternation of the aquatic biota.

D2. Restriction on Water Withdrawal from Clay Brook:

If the natural stream flow in Clay Brook at the point of compliance (sampling station BIO 2.0) is equal to or less than 193,500 gallons per day, then water withdrawal from Clay Brook for domestic use is restricted to a maximum of 26,400 gallons per day, as provided for in the Water Supply Division Permit to Operate for Mountain Water Company, WSID 5281, PIN #BR95-0050. If the natural stream flow at the point of compliance in Clay Brook is greater than 193,500 gallons per day, the Permittee shall insure that water withdrawal for

D2. Restriction on Water Withdrawal from Clay Brook (continued):

domestic use from Clay Brook does not cause stream flows to fall below 167,100 gallons per day at the point of compliance.

The restriction on water withdrawal for domestic use is waived in the event of an emergency (such as fire). The Permittee shall notify the Secretary in writing within three days an emergency withdrawal that causes a violation of the restriction.

D3. <u>Influent and Effluent Limits</u>:

The sewage treatment and disposal systems shall be operated at all times to comply with the following limits:

<u>Parameter</u>	Monthly <u>Average</u>	Weekly <u>Average</u>	Daily <u>Maximum</u>
Influent Flow	N/A	N/A	66,600 gpd
Effluent Flow	N/A	N/A	79,210 gpd
Biochemical Oxygen Demand (5-day)	10 mg/l	15 mg/l	18 mg/l
Total Suspended Solids	10 mg/l	15 mg/l	18 mg/l
Total Dissolved Phosphorus	0.06 mg/l		
Total Kjeldahl Nitrogen (TKN)	5.0 mg/l		
Ammonia Nitrogen	1.0 mg/l		
Nitrate	5.0 mg/l		
Total Nitrogen			12.2 mg/l
Escherichia coli			77 col/100 ml

D4. <u>Annual Inspection, Report and Implementation Schedule:</u>

A. Annual Inspection:

Annually during the month of April, the permittee shall engage a professional engineer registered in the State of Vermont to make a thorough inspection, evaluation, and report of the complete sewage collection, treatment, and disposal system. The engineer's inspection shall include, but not be limited to the following:

- 1. verification of the alternation of the disposal fields:
- 2. verification of the proper operation of all lift station pumps, alarms, and controls in each pump station;
- 3. inspection of the entire treatment system, including calibration of the influent and effluent flow metering devices;

A. <u>Annual Inspection (continued)</u>:

- 4. inspection of the entire collection system, which includes removing each manhole cover to observe the condition of the sewers and manholes, and noting any signs of inflow or excess infiltration;
- 5. walking each disposal field, noting any signs of ponding effluent and the general condition of the surface of the disposal fields;
- 6. checking all the observation wells and note the depth of water in each well;
- 7. checking all ground water monitoring wells and noting the depth to ground water below the ground surface;
- 8. evaluating the performance of the sewage treatment facility over the past year against the permitted influent and effluent limits; and
- 9. noting any necessary repairs or maintenance that needs to be performed.

B. <u>Annual Inspection Report</u>:

By July 1st each year, the permittee shall have a professional engineer submit an annual inspection report including the following items:

- 1. a complete list of the items inspected and the results of the inspection;
- 2. a discussion of the recommended repairs and maintenance required; and
- 3. an evaluation of all flow data and laboratory results of treatment plant effluent to determine compliance with all permit limits. For exceedances of effluent limits, the report shall contain recommendations for complying with effluent limits.

C. <u>Implementation Schedule</u>:

By August 1st each year, the permittee shall notify the Secretary in writing stating how the engineer's recommendations were addressed. For the recommended repair and maintenance items which have not yet been completed, the permittee shall submit an implementation schedule to the Secretary by August 1st stating how and when the outstanding items will be addressed.

D5. Operator Certification:

The permittee is required at all times to employ a wastewater treatment facility chief operator and assistant operator each with a minimum Grade II operator certificate from the Secretary according to the Wastewater Facility Operator Certification Regulations.

The permittee shall notify the Secretary in writing immediately of any change of chief operator or assistant operator.

D6. System Operation and Maintenance:

The wastewater collection, treatment, and disposal system shall be operated and maintained at all times in a manner satisfactory to the Secretary and in a manner that will not pose a risk to the public health and safety, or cause contamination of drinking water supplies, groundwater and/or surface water.

D7. Reporting of Failures:

The permittee shall immediately report any failure of the wastewater collection, treatment, or disposal system to the Secretary, first by telephone within 24 hours of the failure and then in writing within 5 days of the failure. The written notice shall include a discussion of the actions taken or to be taken to correct the failure and to prevent its reoccurrence.

For untreated discharges of sewage that reach Vermont's surface waters, the system operator or their delegate shall follow the notification and signage requirements in 10 V.S.A. 1295 (Act 86) and Agency "Procedure for Public Notice of Untreated Discharges and Unpermitted Discharges to Vermont's Surface Waters." These procedures require:

- A. Posting an electronic Public Alert as soon as possible but no longer than within 1 hour from discovery of an untreated discharge;
- B. Posting a follow-up Overflow and Incident Report within 12 hours of discovery of an untreated discharge and notify the town health officer; and
- C. Posting temporary signs at any public access area(s) downstream of the unpermitted discharges.

D8. Discharge Restrictions:

The permittee shall not allow any person to discharge or cause to be discharged anything other than sanitary wastewater to this treatment and disposal facility.

D9. Freeboard:

The permittee shall maintain a minimum freeboard in the Sequencing Batch Reactors of 2.0 feet measured from the free water surface to the top of the reactor.

Any failure to maintain the required freeboard must be immediately reported to the Secretary, first by telephone within 24 hours of the exceedence and then in writing within 5 days of the exceedence. The written notice shall include a discussion of the actions taken or to be taken to correct the situation.

D10. Operations Reports:

Daily operations data shall be compiled on report forms supplied or approved by the Secretary. The operations reports shall be submitted to the Secretary by the 15th of the month for the previous month's data.

SECTION E "MONITORING"

E1. Quality Assurance/Quality Control Plan:

The permittee shall perform all monitoring in accordance with the June 20, 2006 Quality Assurance Project Plan and the requirements of Section E "Monitoring".

E2. Influent and Effluent Monitoring:

A. Influent Sampling and Analyses:

The influent to the treatment facility shall be sampled prior to the SBRs and analyzed as follows:

<u>Parameter</u>	<u>Units</u>	Sample <u>Type</u>	Sample <u>Frequency</u>
Influent flow (daily total, min, max)	gpd	composite	Continuous
Biochemical Oxygen Demand (5-day)	mg/l		Monthly
Total Suspended Solids	mg/l		Monthly

Notes:

Composite samples shall be taken between the hours 6:00 a.m. and 6:00 p.m., unless otherwise specified by the Secretary.

The influent flow readings shall be submitted to the Secretary by the 15th day of the month following the date of recording. The results of the chemical analyses shall be submitted to the Secretary by the 15th day of the second month following the date of sampling.

E2. <u>Influent and Effluent Monitoring (continued)</u>:

B. <u>Effluent Sampling and Analyses</u>:

The effluent to the leachfields shall be sampled at the main effluent wet well and analyzed as follows:

<u>Parameter</u>	<u>Units</u>	Sample <u>Type</u>	Sample <u>Frequency</u>
Effluent flow Biochemical Oxygen Demand (5-day) Total Suspended Solids Chloride Total Phosphorus Total Dissolved Phosphorus Total Kjeldahl Nitrogen (TKN) Ammonia Nitrate Escherichia coli pH	gpd mg/l mg/l mg/l mg/l mg/l mg/l mg/l col/100 ml S.U.	composite composite composite composite composite composite composite composite composite grab grab	Daily Monthly

Notes:

Composite samples shall be taken between the hours 6:00 a.m. and 6:00 p.m., unless otherwise specified by the Secretary.

The effluent flow readings shall be submitted to the Secretary by the 15th day of the month following the date of recording. The results of the chemical analyses shall be submitted to the Secretary by the 15th day of the second month following the date of sampling.

E3. <u>Groundwater Monitoring</u>:

Groundwater in each monitoring well shall be sampled as per the Quality Assurance Project Plan and analyzed as follows:

<u>Parameter</u>	<u>Units</u>	Sample <u>Type</u>	Sample <u>Frequency</u>
Escherichia coli pH Chloride Total Dissolved Phosphorus Nitrate Depth to Groundwater (below ground surface)	col/100 ml S.U. mg/l mg/l mg/l inches	grab grab grab grab grab	Monthly Monthly Monthly Monthly Monthly At time of sampling

E3. <u>Groundwater Monitoring (continued)</u>:

Notes:

Because of the changing water table levels, the samples from the groundwater monitoring wells might not be collected on the same day or in the same week. If a monitoring well has water at any time during the month, a sample is required to be collected and analyzed.

The results of the chemical analyses and measurements shall be submitted to the Secretary by the 15th day of the second month following the date of groundwater level measurement.

E4. Observation Wells:

For each disposal field in use, the depth of ponding in each of the observation wells shall be measured and recorded at a minimum of once per month.

The results of measurements shall be submitted to the Secretary by the 15th day of the month following the date of measurement.

E5. Surface Water Monitoring:

Surface water at the two surface water sampling stations located in Clay Brook (BIO 2.1 and BIO 2.0), and the seep known as the former Moir Spring, shall be sampled as per the Quality Assurance Project Plan and analyzed as follows:

<u>Parameter</u>	<u>Units</u>	Sample <u>Type</u>	Sample <u>Frequency</u>
Escherichia coli pH Chloride Total Phosphorus¹ Total Dissolved Phosphorus¹ Nitrate Total Iron² Temperature Total Alkalinity (as CaCO3) Turbidity Water withdrawn for domestic use Natural Stream Flow³ Adjusted Stream Flow⁴	col/100 ml S.U. mg/l mg/l mg/l mg/l deg. C mg/l NTU gpd gpd gpd	grab grab grab grab grab grab grab grab	Monthly Daily Daily Daily

E5. <u>Surface Water Monitoring (continued)</u>:

Notes:

- #1 <u>Two</u> independent samples shall be taken and analyzed on each sampling date.
- #2 Required for Clay Brook samples only
- H3 Natural stream flow shall be determined for the point of compliance (sampling station BIO 2.0) as follows: Natural stream flow at the point of compliance = (instantaneous measured stream flow at the flume located upstream of the Inferno Road culvert + instantaneous water withdrawn for domestic use) x 1.1067, adjusted to gallons per day (gpd).
- #4 Adjusted Stream Flow (gpd) = Natural Stream Flow (gpd) Water withdrawn for domestic use (gpd).

The stream flow readings shall be submitted to the Secretary by the 15th day of the month following the date of recording. The results of the chemical analyses shall be submitted to the Secretary by the 15th day of the second month following the date of sampling.

E6. <u>Annual Water Quality Evaluation</u>:

Annually by December 31st, the permittee shall have a qualified water quality specialist submit an evaluation to the Secretary of all groundwater and surface water data for, at a minimum, the previous 12 months of operation. The evaluation shall indicate whether there has been any short or long term impacts on groundwater and surface water quality, including a determination of compliance with the Vermont Water Quality Standards.

E7. Biological Sampling:

In August and September each year, the permittee shall conduct biological sampling in the receiving stream upstream and downstream of the indirect discharge in accordance with the procedures approved by the Secretary.

Results of the biological sampling shall be submitted to the Secretary by March 31st of the following year. The Secretary may require changes to the biomonitoring procedures depending upon the results of the annual biological sampling.

E8. Sampling and Testing Procedures:

All wastewater, groundwater and surface water sampling, preservation, handling and test procedures used to comply with the monitoring requirements herein shall conform to procedures specified in the most current edition of Standard Methods for the Examination of Water and Wastewater APHA - AWWA - WPCF, and the Vermont Water Quality Standards unless written approval of an alternate method is received from the Agency.

The laboratory utilized for analyzing the samples shall demonstrate successful participation in third party proficiency testing recognized by ISO or NELAP for all parameters and shall analyze any check sample provided by the Secretary. Failure to obtain an acceptable result for either the Secretary's check sample or successful third party proficiency testing may be a basis for requiring an alternate analytical laboratory.

The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at regular intervals to ensure accuracy of measurements or shall ensure that both activities will be conducted. Samples shall be representative of the volume and quality over the sampling and reporting period.

E9. <u>Miscellaneous Monitoring</u>:

If the permittee monitors any required parameter set forth in this permit for this treatment and disposal system more frequently or at additional locations outside the treatment facility than required by this permit, the results of such monitoring shall be included on the Discharge Monitoring Report Form.

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years or longer if requested by the Secretary. Records shall include laboratory bench sheets showing exact location, time and composites of sample as well as analytical procedures used, interim results obtained and all calculations supporting the reported test results.

E12. Cooling Tower "Blowdown" Monitoring Requirements:

No cooling tower "blowdown" water quality monitoring is required under this permit provided that no biocides and/or other chemicals or compounds are used in the cooling tower. The Secretary reserves the right to require monitoring of the "blowdown" water in accordance with Condition A(7) if biocides and/or other chemicals or compounds are used in the cooling tower.

SECTION F "COMPLIANCE REVIEW"

If the results of monitoring and analysis of the effluent, groundwater or surface water indicates that a violation of the effluent disposal limits, or a violation of the Vermont Water Quality Standards, or a Significant Alteration of the Aquatic Biota has occurred, is occurring, or is likely to occur, the Secretary may increase the frequency of, or change the location and/or type of monitoring of groundwater or surface water, and/or require the permittee to take appropriate corrective actions to eliminate or reduce the possibility of a violation.

The issuance of this permit, ID-9-0260, to Summit Ventures NE, LLC by the Secretary relies upon the data, designs, judgment and other information supplied by the applicant, his consultants and other experts who have participated in the preparation of the application. The Secretary makes no assurance that this system will meet the performance objectives of the applicant and no warranties or guarantees are given or implied.

SECTION G "EFFECTIVE DATE"

Emily Boedecker, Commissioner

This Indirect Discharge Permit, ID-9-0260, issued to Summit Ventures	NE, LLC
for the discharge of treated domestic sewage from the Lincoln Peak Ba	ise Area at
the Sugarbush Ski Area in Warren, Vermont is effective on this da	ay of May,
2017.	

Department of Environmental Conservation
By DRAFT
Bryan Redmond, Director
Drinking Water and Groundwater Protection Division